

## Claims:

1. Apparatus for processing an ECG signal, the apparatus comprising:

a transmitter having an input for receiving the signal and a processor which separates the signal into first and second signal components, manipulates the first signal component to determine the temporal spacing between consecutive R-peaks in the QRS complex of the signal, and in which the second signal component consists of the ECG signal; and

a receiver;

in which the transmitter transmits both the manipulated first signal component and the second signal component to the receiver.

2. Apparatus as claimed in claim 2 in which the processor comprises an amplifier which amplifies the ECG signal prior to separation into first and second signal components.

3. Apparatus as claimed in claim 1 or claim 2 in which the processor further comprises first and second signal filters which separate the electrocardiograph signal into the first and second signal components.

4. Apparatus as claimed in claim 3 in which the first signal filter includes a high-pass filter.

5. Apparatus as claimed in claim 4 in which the output from the high-pass filter is fed into a low-pass filter.

6. Apparatus as claimed in any preceding claim in which the processor includes a micro-controller which receives the first and second signal components and converts at least the first signal component to a digital signal prior to manipulation to determine the R-R time intervals.

7. Apparatus as claimed in any preceding claim in which the first and second signal components are fed into a data stream for transmission to the receiver.

8. Apparatus as claimed in any preceding claim in which the processor samples the first signal component between 500 Hz and 2000 Hz.

9. Apparatus as claimed in any preceding claim in which the processor samples the first signal component at approximately 1000Hz.

10. Apparatus as claimed in any preceding claim in which the processor samples the second signal component at approximately 500 Hz.

11. A method for processing an ECG signal, the method comprising the steps of:

receiving the signal at an input of a transmitter, the transmitter having a processor which separates the signal into first and second signal components, and manipulates the first signal component to determine the temporal spacing between consecutive R-peaks in the QRS complex of the signal, and in which the second signal component consists of the ECG signal; and

transmitting both the manipulated first signal component and the second signal component to a receiver.

12. A method as claimed in claim 11 further comprising the step of amplifying the ECG signal prior to separation into first and second signal components.

13. A method as claimed in claim 11 or claim 12 further comprising the step of separating the ECG signal into the first and second signal components using first and second signal filters.

14. A method as claimed in claim 13 which includes the step of filtering the first signal component using a high-pass filter.

15. A method as claimed in claim 14 comprising the step of feeding the output from the high-pass filter into a low-pass filter.

16. A method as claimed in any preceding claim comprising the steps of:

providing a micro-controller in the processor ;  
receiving the first and second signal components in the micro-controller; and  
converting at least the first signal component to a digital signal prior to manipulation to determine the R-R time intervals.

17. A method as claimed in any preceding claim comprising the step of feeding the first and second signal components into a data stream for transmission to the receiver.

18. Apparatus as claimed in any preceding claim comprising the step of sampling first signal component between 500 Hz and 2000 Hz.

19. Apparatus as claimed in any preceding claim comprising the step of sampling the first signal component at approximately 1000Hz.

20. A method as claimed in any preceding claim comprising the step of sampling the second signal component at approximately 500 Hz.

21. Apparatus as described hereinbefore with reference to the accompanying drawings.

22. A method as described hereinbefore with reference to the accompanying drawings.